

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: SUSY Tsang-Foster Examiner #: 76063 Date: 6/2/04
 Art Unit: 1745 Phone Number: 5571-272-1293 Serial Number: 10/009,216
 Mail Box and Bldg/Room Location: REMSEN 6D75 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Lithium Secondary Battery
 Inventors (please provide full names): Please see attached sheet

Earliest Priority Filing Date: Feb 16, 2001

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search for a lithium secondary (also known as rechargeable) battery comprising a positive electrode, a negative electrode, and a separator, a nonaqueous electrolyte solution containing a lithium compound as an electrolyte wherein at least one of the positive electrode, the negative electrode, the separator and the nonaqueous electrolyte solution contains a compound having an organic base and an inorganic acid which are unitarily combined in a molecule. A more specific definition of the compound is given on page 17 of the specification, first paragraph (see attached sheet 17). Specific examples of the compound are given by chemical formulas I-VI as listed on page 17 of the specification. ~~See~~ The structures for chemical formulas I-VI are given on pages 17-19 of the specification (see attached pages 17-19 of the specification. Thank you. Please also see general claim 1.

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>A. Tuller</u>	NA Sequence (#) _____	STN <u>1</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>6</u>	Questel/Orbit _____
Date Searched Picked Up: _____	Bibliographic _____	Dr. Link _____
Date Completed: <u>6/3/04</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>30</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>83</u>	Other _____	Other (specify) _____

(attached)
 Applicant
 elected
 compound
 (b)
 in
 claim 1.



STIC Search Report

EIC 1700

STIC Database Tracking Number: 123533

TO: Susy Tsang-Foster
Location: REMSEN 6D75
Art Unit : 1745
June 3, 2004

Case Serial Number: 10/009216

From: Kathleen Fuller
Location: EIC 1700
REMSSEN 4B28
Phone: 571/272-2505
Kathleen.Fuller@uspto.gov

Search Notes

I searched for the specific compounds I-VI used in a battery or electrolyte. Only the applicant was a good reference . I also text searched for the concept of 1b.

10/009,216

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
1	BRS	L3	3	((429/231.95,326,324,312,339,340,341,328,24,231.1,212).CCLS.) and ((organic near3 (base or basic)) near3 salt)	USPA T; US-P GPUB	2004/05/24 16:36			0
2	BRS	L4	8	((429/231.95,326,324,312,339,340,341,328,24,231.1,212).CCLS.) and ((dipolar adj2 ion) (zwitterion))	USPA T; US-P GPUB	2004/05/24 16:36			0
3	BRS	L5	11	3 4	USPA T; US-P GPUB	2004/05/24 16:59			0
4	BRS	L21	9726	salt with nitrogen with (heterocycl\$3 ring)	USPA T; US-P GPUB	2004/05/24 17:49			0
5	BRS	L22	804	21 and (cation\$3 with nitrogen with (heterocycl\$3 ring))	USPA T; US-P GPUB	2004/05/24 17:48			0
6	BRS	L23	52	22 and ((sulfate sulphate sulfuric sulphuric sulfonate\$1 sulphonat\$1) with salt with nitrogen with (heterocycl\$3 ring))	USPA T; US-P GPUB	2004/05/24 17:48			0
7	BRS	L24	43	22 and ((chloride hydrochloride (hydrogen adj chloride)) with salt with nitrogen with (heterocycl\$3 ring))	USPA T; US-P GPUB	2004/05/24 17:48			0
8	BRS	L25	85	23 24	USPA T; US-P GPUB	2004/05/24 17:49			0
9	BRS	L26	1	25 and H01M\$8	USPA T; US-P GPUB	2004/05/24 17:49			0
10	BRS	L27	23	25 and lithium	USPA T; US-P GPUB	2004/05/24 17:50			0
11	BRS	L28	1	27 and (battery (electrochemical adj cell))	USPA T; US-P GPUB	2004/05/24 17:51			0
12	BRS	L30	4808	(reaction product) with acid with (nitrogen amine amino amide) with (ring heterocycl\$3)	USPA T; US-P GPUB	2004/05/24 18:10			0
13	BRS	L31	3097	30 and ((nitrogen amine amino amide) near3 (ring heterocycl\$3))	USPA T; US-P GPUB	2004/05/24 17:58			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
14	BRS	L32	1	31 and H01M\$8	USPA T; US-P GPUB	2004/05/24 17:53			0
15	BRS	L33	5	31 and (lithium near3 (cell battery))	USPA T; US-P GPUB	2004/05/24 18:02			0
16	BRS	L34	11	H01M\$8 and (zwitterion (dipolar adj2 ion))	USPA T; US-P GPUB	2004/05/24 18:05			0
17	BRS	L35	11	34 and lithium	USPA T; US-P GPUB	2004/05/24 18:03			0
18	BRS	L36	11	34 and (lithium li-ion lithium-ion)	USPA T; US-P GPUB	2004/05/24 18:03			0
19	BRS	L37	6	((li adj2 (cell battery)) and (zwitterion (dipolar adj2 ion)))	USPA T; US-P GPUB	2004/05/24 18:05			0
20	BRS	L38	22	((li-ion lithium lithium-ion) adj2 (cell battery)) and (zwitterion (dipolar adj2 ion)))	USPA T; US-P GPUB	2004/05/24 18:07			0
21	BRS	L39	22	37 38	USPA T; US-P GPUB	2004/05/24 18:06			0
22	BRS	L40	13	39 not 36	USPA T; US-P GPUB	2004/05/24 18:06			0
23	BRS	L41	0	((li-ion lithium lithium-ion) adj2 (cell battery)) and (zwitterion (dipolar adj2 ion)))	EPO; JPO; DERW ENT	2004/05/24 18:12			0
24	BRS	L42	4	H01M\$9 and (zwitterion (dipolar adj2 ion)))	EPO; JPO; DERW ENT	2004/05/24 18:08			0
25	BRS	L43	1577	(reaction product) with acid with (nitrogen amine amino amide) with (ring heterocycl\$3)	EPO; JPO; DERW ENT	2004/05/24 18:12			0
26	BRS	L44	1	43 and (h01M\$9)	EPO; JPO; DERW ENT	2004/05/24 18:10			0
27	BRS	L45	0	43 and ((li-ion lithium lithium-ion) adj2 (cell battery))	EPO; JPO; DERW ENT	2004/05/24 18:12			0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
28	BRS	L46	4171	{salt} with acid with (nitrogen amine amino amide) with (ring heterocycl\$3)	EPO; JPO; DERW ENT	2004/05/2 4 18:12			0
29	BRS	L47	1	46 and ((li-ion lithium lithium-ion) adj2 (cell battery))	EPO; JPO; DERW ENT	2004/05/2 4 18:12			0